West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Significant Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Significant Modification, and shall be considered a supplement to the original Fact Sheet corresponding with the issuance of the initial Title V operating permit issued on June 07, 2007.

Permit Number: **R30-06700025-2007**
Plant Identification Number: **03-54-067-00025**
Permittee: **SMR Technologies, Inc.**
Mailing Address: **93 Nettie-Fenwick Road, Fenwick, West Virginia 26202-9718**

Permit Action Number*: SM01;* Revised*: February 5, 2008*

Physical Location:	Fenwick, Nicholas County, West Virginia
UTM Coordinates:	536.20 km Easting • 4,230.90 km Northing • Zone 17
Directions:	The facility is located along WV Route 39 in Fenwick, WV.

Facility Description

The facility produces a variety of rubber fabric products, which are described in more detail in the fact sheet for the renewed Title V permit issued on June 07, 2007. The SIC and NAICS codes for this facility are 3069 and 326299, respectively.

The purpose of this permitting action is to incorporate into the Title V permit the new requirements in revised NSR permit R13-0415B. Once incorporated, this operating permit will allow for the installation, startup and operation of one (1) new 600 HP (24.5 MMBtu/hr design heat input) firetube steam boiler, capable of combusting either natural gas or fuel oil.

Emissions Summary

Table A below sets forth the facility-wide potential emissions (*i.e.*, potential to emit, PTE) prior to this permitting action, as well as the PTE increases associated with the addition of the proposed 24.5 MMBtu/hr boiler (Em. Unit ID 007).

Table A

Pollutant	PTE before modification (tons/yr)	Increase in PTE due to modification (tons/yr)	PTE after modification (tons/yr)
Carbon Monoxide (CO)	6.18	9.01	15.19
Nitrogen Oxides (NOx)	10.6	15.3	25.9
Particulate Matter (PM_{10})	2.25	2.53	4.78
Total Particulate Matter (TSP)	2.25	2.53	4.78
Sulfur Dioxide (SO_2)	15.1	21.8	36.9
Volatile Organic Compounds (VOC)	41.67	0.59	42.26
Toluene	16.7	-0-	16.7
Hexane	7.2	-0-	7.2
Formaldehyde	< 0.5	0.025	< 0.5
Miscellaneous HAPs	0.5	0.0011 (1)	0.5011

(1) Consisting of 0.00023 tpy of benzene, and 0.00087 tpy of naphthalene (according to Attachment J of the permittee's modification application).

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 16.7 tons per year of toluene. Due to this facility's potential to emit over 10 tons per year of a single HAP, SMR Technologies, Inc., is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Combustion of fuel in indirect heat exchangers
	45CSR10	Emissions of sulfur oxides
	45CSR13	Permits for Construction
	45CSR16	NSPS pursuant to 40 C.F.R. Part 60
	45CSR30	Operating permit requirement.
	40 C.F.R. 60 Subpart Dc	NSPS for small industrial-commercial-institutional steam generating units

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of

the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-0415B	December 11, 2007	
R30-06700025-2007	June 07, 2007	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

Throughout the following discussion, when a rule is applied to either the proposed boiler (Em. Pt. ID EP007) or the existing boiler (Em. Pt. ID EP001), such discussions will be separated, and identified with a heading. Most of the discussion herein is with regard to the proposed boiler.

45CSR2 ***To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers***

Proposed Boiler (Em. Pt. ID EP007)

The proposed boiler is capable of combusting natural gas and fuel oil; therefore, it is a Type 'b' fuel-burning unit in accordance with the definition given in 45CSR§2-2.10.b. The PM emissions from the proposed boiler (Em. Pt. ID EP007) are subject to the 10% opacity limit in 45CSR§2-3.1. (permit condition 4.1.1.), and compliance with this limit will be demonstrated using the applicable monitoring in permit condition 4.2.1.

The proposed boiler, which has a design heat input (DHI) of 24.5 MMBtu/hr, is subject to the applicable particulate weight emission limit set forth in 45CSR§2-4.1.b. Thus, the PM emission weight limit is,

W_{PM} = (0.09) × (24.5 MMBtu/hr) = 2.205 pounds per hour

The boiler has a maximum particulate matter PTE of 0.58 lb/hr while combusting fuel oil (0.19 lb/hr for natural gas). Thus, it is impossible (under proposed operating conditions) for the proposed boiler to exceed the 2.205 lb/hr limit given by 45CSR§2-4.1.b. Refer to new permit condition 4.1.5. for the PM emission rate limit. This 45CSR§2-4.1.b. limit is streamlined by the more stringent requirement in permit R13-0415B, condition 4.1.2.d. which is which is noted in condition 4.1.5.

The boiler has a DHI less than 100 MMBtu/hr; therefore, according to 45CSR§2-8.4.c., the boiler is exempt from the periodic testing requirements in 45CSR§2-8.1.a., and monitoring in 45CSR§2-8.2. However, the Director reserves the right to require testing pursuant to 45CSR§§2-8.1.b. and 8.1.c.

The proposed boiler is subject to the recordkeeping set forth in 45CSR§2-8.3.c. These records are of the operating schedule of the proposed boiler, and the quality and quantity of fuel combusted in the boiler (permit condition 4.4.1.).

The proposed boiler is allowed an exception to the 10% opacity limit for startup, shutdown, and malfunction within the limitations and requirements prescribed by 45CSR§2-9.1. This language and citation will be used in conjunction with the 10% opacity limit already discussed (permit condition 4.1.1.).

The boiler is subject to the general maintenance and operation requirement set forth in 45CSR§2-9.2., which is set forth as permit condition 4.1.7.

Existing Boiler (Em. Pt. ID EP001)
For the existing boiler (EP001), the hourly limits in condition 4.1.3. were changed to match the limits in R13-0415B, condition 4.1.1.a. The R13 permit combined the Natural Gas and No.2 Fuel Oil columns by setting the hourly limits for each pollutant to the limit corresponding to the fuel that produced the greater emission rate. In this case, both CO and VOC emissions are greater during natural gas combustion, while NOx, PM, ans SO_2 emissions are greater while combusting No.2 fuel oil. This explains why certain values are stricken in condition 4.1.3.

The existing boiler remains a 16.8 MMBtu/hr DHI unit, and thus the PM limit prescribed by 45CSR§2-4.1.b. remains at (0.09) × (16.8 MMBtu/hr) = 1.51 pounds PM per hour. This limit is still streamlined by the more stringent limit of 0.40 lb/hr in R13-0415B, 4.1.1.a. Thus, note 1 in condition 4.1.3. remains the same.

45CSR10 ***To Prevent and Control Air Pollution from the Emission of Sulfur Oxides***
Proposed Boiler (Em. Pt. ID EP007)
The proposed boiler is capable of combusting natural gas and fuel oil; therefore, it is a Type 'b' fuel-burning unit in accordance with the definition given 45CSR§10-2.8.b. The proposed boiler is subject to the sulfur dioxide emission rate limit set by applicable requirement 45CSR§10-3.3.f. Thus, the SO_2 emission rate limit is,

$$W_{SO2} = (3.2) \times (24.5 \text{ MMBtu/hr}) = 74.8 \text{ pounds per hour}$$

The boiler has a maximum SO_2 PTE of 4.97 lb/hr while combusting fuel oil (0.015 lb/hr for natural gas). Thus, it is impossible (under proposed operating conditions) for the proposed boiler to exceed the 74.8 lb/hr limit given by 45CSR§10-3.3.f. Refer to new permit condition 4.1.5. for the SO_2 emission rate limit. This 45CSR§10-3.3.f. limit is streamlined by the more stringent requirement in permit R13-0415B, condition 4.1.2.d. which is 4.97 lb/hr. The streamlining is noted in condition 4.1.5.

The proposed boiler combusts only natural gas or fuel oil; therefore, in accordance with 45CSR§10-10.3., the boiler is exempt from the testing and MRR requirements set forth in 45CSR§10-8. However, compliance with the weight rate emission limit must be practically demonstrated. This will be accomplished by performing the recordkeeping set forth in permit condition 4.4.1.

Existing Boiler (Em. Pt. ID EP001)
As discussed above under 45CSR2, condition 4.1.3. was altered to match R13-0415B, 4.1.1.a. The applicable SO_2 limit prescribed by 45CSR§10-3.3.f. remains at (3.2) × (16.8 MMBtu/hr) = 53.76 pounds SO_2 per hour. This limit is still streamlined by the more stringent limit of 3.44 lb/hr in R13-0415B, 4.1.1.a. Thus, note 2 in condition 4.1.3. remains the same.

45CSR13, Permit R13-0415B

Condition 4.1.6. of R13-0415B retains MEK as in condition A.5. of R13-0415A. However, as discussed in the Fact Sheet for the renewed Title V permit, MEK will remain unlisted in Title V permit condition 3.1.12.

Condition 4.3.1. of R13-0415B sets forth testing for the purpose of demonstrating initial compliance with the PM limit in R13-0415B, Condition 4.1.2., and the visible emission limit in 4.1.3. for the proposed boiler (Em. Unit ID 007). This condition is set forth as Title V permit condition 4.3.1.

45CSR16 ***Standards of Performance for New Stationary Sources Pursuant to 40 C.F.R. Part 60***

The proposed boiler is subject to this State rule due to the fact that the boiler is subject to 40 C.F.R. Part 60 Subpart Dc, and Subpart Dc is not excluded in 45CSR§16-4.1.b. The language "45CSR16" will be added to all citations of permit conditions that have a citation from Subpart Dc. An instance of specific applicability of this rule is discussed below under the reporting requirements of 40 C.F.R. Part 60 Subpart Dc.

40 C.F.R. Part 60 Subpart Dc ***Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units***

Applicability

The proposed boiler will be constructed after June 9, 1989, and has a DHI less than 100 MMBtu/hr, but greater than 10 MMBtu/hr. Therefore, this NSPS applies to the proposed boiler in accordance with 40 C.F.R. §60.40c(a).

Sulfur Dioxide Control via Fuel Oil Sulfur Limitation

Applicable requirement §60.42c(d) sets an SO_2 emission limit of 0.50 lb/MMBtu heat input; or, as alternative, the source may not combust fuel oil containing greater than 0.5 weight percent sulfur. The permittee has elected to comply with the applicable alternative fuel oil sulfur content limit ($\leq$ 0.5 weight percent sulfur). This NSPS sulfur content is streamlined by the more stringent 0.2 percent by weight requirement in R13-0415B, 4.1.2.e. The more stringent sulfur content limit is set forth in condition 4.1.6. since this is the permittee's proposed sulfur content used to determine the proposed SO_2 emission rate of 4.97 lb/hr (condition 4.1.5.). Pursuant to §60.42c(h)(1), the permittee will demonstrate compliance with the fuel oil sulfur content using certification from the fuel supplier. In accordance with §60.44c(g), an initial performance test to demonstrate compliance with the oil sulfur limit shall consist of sampling and analyzing the initial tank of fuel oil. Thereafter, the permittee must sample the oil in the fuel tank after each new shipment of oil is received according to the procedures in §60.46c(d)(2). Refer to permit conditions 4.1.6. for the sulfur limit, and 4.4.1. for the fuel monitoring requirements.

Non-applicability of Particulate Matter Limitations and Associated Compliance Demonstration

The particulate matter standards in §§60.43c(a) and (b) are applicable to steam generating units that combust either coal or wood alone, or in combination with other fuels. Since the proposed boiler combusts only natural gas or fuel oil, these PM standards are not applicable. Furthermore, since the proposed boiler's DHI is also less than 30 MMBtu/hr, the opacity and PM weight emission limits in §60.43c(c) and §60.43c(e)(1), respectively, are not applicable to the proposed boiler. Consequently, §60.43c(d) has no applicability to the proposed boiler. Finally, since there is no applicable Subpart Dc PM limit or standard, the proposed boiler is neither subject to the PM compliance and performance tests in §60.45c, nor is it subject to the PM emissions monitoring in §60.47c.

Recordkeeping

The permittee shall keep records of the applicable information specified by §§60.48c(e)(1), (2), and (11). Note that the other information (*i.e.*, §§60.48c(e)(3) through (10)) are not applicable to the proposed boiler.

Records of the fuel supplier certification are sufficient monitoring according to §60.46c(e). The applicable records are specified in §60.48c(f)(1) (for distillate oil) since the proposed boiler will use fuel certification to comply with the sulfur dioxide limitation in §60.42c(d). Refer to permit condition 4.4.1.

As an alternative to maintaining records of the amount of each fuel combusted during each operating day, as specified in §60.48c(g)(1), the permittee may elect to maintain records of the amount of each fuel combusted during each calendar month, as allowed by §60.48c(g)(2). This relaxation is allowed due to the fact that fuel certification will be recorded pursuant to §60.48c(f). Refer to permit condition 4.4.1.

Reporting

The proposed boiler is subject to the reporting requirements set forth in §60.48c(a), which is notification of the date of construction and actual start-up. However, §60.48c(a)(4) would not be applicable to the proposed boiler since fuel certification will be used to control SO_2 emissions, rather than a control device. Refer to permit condition 4.5.3. Since the proposed boiler is subject to a fuel oil sulfur limit under §60.42c, the permittee must submit reports to the Administrator pursuant to §§60.48c(d) and (e), and these reports must contain a certified statement by the permittee regarding the fuel combusted during the reporting period according to §60.48c(e)(11). Refer to permit condition 4.5.2. §60.48c(j) defines the reporting period for the Subpart Dc reports, and requires reports be submitted to the Administrator, and be postmarked by the 30th day following the end of the reporting period. It should be noted that 45CSR§16-5.1. (discussed above) requires the permittee to submit the same Subpart Dc reports to the Secretary (of WV DEP), in addition to the Administrator (of US EPA).

Revision of Permit Condition 3.7.2.b.

This permit shield condition listed 40 C.F.R. 60 Subpart Dc as not being not applicable to the source. This non-applicability determination is relevant only to the existing 16.8 MMBtu/hr boiler No.1 (Em. Unit ID 001). Subpart Dc is applicable to the proposed boiler (Em. Unit ID 007), as discussed above. Therefore, the language in 3.7.2.b. has been revised to emphasize that the non-applicability of Subpart Dc is with regard to the boiler No.1 alone, and that Subpart Dc is applicable to the proposed boiler.

Correction of Citation for Permit Condition 4.1.3.

While working on this modification, the permit writer found a discrepancy concerning the appropriate 45CSR10 citation for permit condition 4.1.3. Until this permitting action, 45CSR§10-3.1.f. was cited (among other requirements) for condition 4.1.3. However, after review of 45CSR10, it was found that there is no rule language designated by 3.1.f. Furthermore, the same condition 4.1.3. has a note below the table indicating that compliance with the streamlined SO_2 weight limit in the table assures compliance with 45CSR§10-3.3.f. Finally, the previous permit R13-0415A, condition B.4. (the more stringent SO_2 weight rate limit), specified that 45CSR§10-3.3.f. is an applicable requirement. The citation discrepancy was probably a typographical error. Therefore, as part of this permitting action the citation will be changed to 45CSR§10-3.3.f.

Recordkeeping

Current Title V permit condition 4.4.1. sets forth recordkeeping requirements to demonstrate compliance with the heat input and emission limits for the existing boiler 001. Permit R13-0415B, condition 4.2.1., sets forth several of the same requirements for both the existing boiler, and the proposed boiler. The R13 condition also lists other requirements not in Title V 4.4.1. In order to simplify the condition and avoid redundancy, a comparison was made in order to combine them and set forth one revised condition 4.4.1. The following requirements in existing Title condition 4.4.1. were not found in R13-0415B, condition 4.2.1.; therefore, they are set forth as items g., h., and i. in new condition 4.4.1.

g. monthly records of the hours of operation

h. Fuel quality records for natural gas, consisting of an initial characterization provided by the fuel supplier which includes the ash, sulfur, moisture, volatile matter, and BTU content.

i. Fuel quality records for No. 2 fuel oil, consisting of an initial characterization provided by the fuel supplier which includes the ash, moisture, and volatile matter content (in addition to BTU and sulfur content).

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

a. **40 C.F.R. Part 64** ***Compliance Assurance Monitoring (CAM)***
40 C.F.R. §64.2(a)(2) sets forth a rule applicability requirement that an emission unit must use a *control device* (as defined in §64.1) to achieve compliance with an emission limitation or standard for a regulated air pollutant. The proposed boiler (Em. Unit ID 007) will not use a control device to achieve compliance, and as such, it does not meet this applicability requirement. Additionally, the proposed boiler is not expected to emit an amount of any regulated air pollutant that would exceed a major source threshold. This also is another applicability requirement (§64.2(a)(3)) that the proposed boiler will not satisfy. Should the boiler ever be permitted to be retrofitted with an emissions control device (although not anticipated at this time), the boiler would remain exempt from 40 C.F.R. Part 64 as long as the pre-control PTE of any regulated air pollutant emitted remains below the corresponding major source threshold. For these two reasons, the proposed boiler is not subject to 40 C.F.R. Part 64.

b. **40 C.F.R. Part 60 Subpart Db** ***Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units***
The proposed boiler has a DHI of 24.5 MMBtu/hr. According to 40 C.F.R. §60.40b(a), this subpart is applicable to steam generating units that have a DHI greater than 100 MMBtu/hr. Since the proposed boiler does not meet this applicability criterion, 40 C.F.R. 60 Subpart Db is not applicable to the boiler.

c. **45CSR1** ***NOx Budget Trading Program as a Means of Control and Reduction of Nitrogen Oxides from Non-electric Generating Units***
The proposed boiler has a DHI less than 250 MMBtu/hr, which is the minimum DHI that is part of the rule applicability requirements (the other criteria being date of construction). Thus, the proposed boiler does not meet the applicability criteria given in 45CSR§§1-4.1.b.3. or 4.1.b.6.

d. **Formaldehyde Limit**
Condition A.7. in R13-0415A was removed during the transition to R13-0415B. This condition set forth the facility-wide formaldehyde emission rate limit of 1,000 pounds per year. The permit writer discussed this change with the writer of R13-0415B, and found that this condition was based upon 45CSR§27-3.1., which applies to plants that are "Chemical Processing Units". The writer of R13-0415B removed the condition because he determined that the permittee's plant is not a "Chemical Processing Unit" as defined in 45CSR§27-2.4.

e. **HAPs in cements, solvents, or coatings**
Title V condition 3.1.14. required notification to the Director concerning use of materials that contain any recognized HAP not listed in condition 3.1.12. The underlying authority for this requirement was condition A.6. of R13-0415A. The writer of R13-0415B determined that this requirement is unnecessary. Therefore, condition 3.1.14. is stricken in the permit.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: December 20, 2007
Ending Date: January 22, 2008

All written comments should be addressed to the following individual and office:

Denton B. McDerment
Title V Permit Engineer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Denton B. McDerment
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
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Response to Comments

No comments were received from either the public or U.S. EPA.